

1 9. The method of claim 8, wherein using the address space map to implement modified
2 routing further comprises:

3 subject to a determination that the first path has not been preferenced, and further
4 subject to a determination that the amount of messages from the first source
5 address range arriving from the first path exceeds a second threshold amount,
6 deaggregating a published route associated with the first source address range.

1 10. The method of claim 9, wherein the first source address range is a group of addresses
2 corresponding to the same Internet Protocol address and mask.

1 11. The method of claim 9, wherein the first threshold is a preset percentage of the total
2 amount of messages from a first source address range.

1 12. The method of claim 9, wherein the second threshold is a preset percentage of the
2 total amount of messages from a first source address range.

1 13. A method for performing traffic routing management in a network, the method
2 comprising:

3 monitoring source address ranges for a plurality of signals;
4 monitoring arrival network connection points for the plurality of signals; and
5 developing an address space map of the network.

1 28. The method of claim 25, wherein each signal traffic statistics entry further
2 comprises:

3 an Internet Protocol address;

4 a prefix length for the Internet Protocol address range; and

5 an associated route entry.

1 29. The method of claim 25, wherein each route entry comprises an advertised Border
2 Gateway Protocol route.

1 30. The method of claim 13, wherein the plurality of signals monitored includes the
2 signals sent within the network.

1 31. The method of claim 13, wherein the plurality of signals monitored includes a
2 sampled portion of the signals sent within the network.

1 32. The method of claim 13, wherein the plurality of signals monitored includes:

2 a set of signals sent within the network; and

3 a set of signals generated to fill in portions of the address space map of the network.

1 33. The method of claim 13, wherein the plurality of signals monitored includes a set of
2 signals generated to provide substantially equal signal coverage of the network.

1 34. The method of claim 13, wherein monitoring is performed automatically and
2 automatically used to develop the address space map.

1 35. The method of claim 14, wherein the process of using the address space map is
2 performed automatically.

1 36. The method of claim 15, wherein preferencing a route table route is performed
2 automatically.

1 37. The method of claim 20, wherein injecting a new route is performed automatically.

1 38. The method of claim 25, wherein compiling signal traffic statistics is performed
2 automatically.

1 39. A computer program product for performing traffic routing management in a
2 network, the computer program product comprising:

3 a computer readable medium that stores program code including:

4 program code that monitors source address ranges for a plurality of signals;

5 program code that monitors arrival network connection points for the plurality of
6 signals; and

7 program code that develops an address space map of the network.

1 40. The computer program product of claim 39, further comprising:

2 program code that uses the address space map to route a signal to a network
3 connection point topologically closest to a destination address range of the
4 signal.

1 41. The computer program product of claim 40, wherein program code that uses the
2 address space map further comprises:

3 program code that preferences a route table route that is not selected naturally
4 according to a network routing protocol and is not prohibited according to a
5 network configuration parameter, subject to a determination that the route
6 exceeds a signal quantity threshold.

1 42. The computer program product of claim 40, wherein program code that uses the
2 address space map further comprises:

3 program code that injects a new route within the source address range of a signal into
4 the network.

1 43. The computer program product of claim 40, wherein program code that uses the
2 address space map further comprises program code that reconciles differences between the
3 address map and existing routes in the network.

1 44. The computer program product of claim 39, wherein program code that develops the
2 address space map of the network further comprises:

3 program code that collects route entries from a route table on a router in the network;
4 and

5 program code that compiles signal traffic statistics entries on the monitored plurality
6 of signals passing through the router in the network, wherein each signal

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7 traffic statistics entry includes a measure of the quantity of signals
8 corresponding to a source address range.

1 45. The computer program product of claim 44, further including program code that
2 correlates each signal traffic statistics entry with a route entry.

1 46. A method for managing the routing of signals in a network, comprising:
2 receiving route entries from a route table in the network;
3 receiving Internet Protocol statistics data entries on signals flowing through one or
4 more routers on the network, wherein each Internet Protocol statistics data
5 entry includes a measure of the quantity of signals corresponding to a signal
6 source address range;
7 developing an address space map of the network using the route entries and Internet
8 Protocol statistics data entries; and
9 implementing the address space map.

1 47. The method of claim 46, wherein implementing the address space map comprises
2 selecting a preferred route.

1 48. The method of claim 47, wherein selecting the preferred route comprises:
2 selecting as the preferred route a route entry that is not selected naturally according to
3 a network routing protocol and is not prohibited according to a network
4 configuration parameter, subject to a determination that the route exceeds a
5 signal quantity threshold.

58. In a system comprising a backbone connected to a content provider and a first network connected to a content user, wherein the first network is connected by one or more connections to a backbone, a method for routing traffic between the content provider and the content user comprising:

placing the content provider traffic onto the backbone;

routing the traffic on the backbone to the first network; and

placing the traffic onto the connection between the first network and the backbone

that is topologically closest to the content user.

59. The method of claim 58, wherein the content provider is connected to the backbone via an access point.

60. The method of claim 58, wherein the content provider is a World Wide Web content provider.

61. The method of claim 58, wherein the system further includes a second network connected to a content user, the method further including:

determining whether traffic was sent to the system via the first network or the second

network and selecting the network sending traffic to the system;

routing the traffic on the backbone to the selected network; and

placing the traffic onto the connection between the selected network and the

backbone that is topologically closest to the content user.

1 67. The system of claim 62, wherein each point of presence comprises:
2 a router for routing traffic between the backbone and one or more peering partner
3 networks, and wherein the router further generates Internet Protocol statistics
4 reports and reads the route tables and sends the Internet Protocol statistics
5 reports and the route tables to a computer; and
6 the computer for receiving the Internet Protocol statistics reports and the route tables
7 and sending the Internet Protocol statistics reports and the route tables to the
8 network operations center.

1 68. The system of claim 67, wherein the computer further correlates the Internet Protocol
2 statistics reports and the route tables.

1 69. The system of claim 67, wherein the computer further receives preferred routes from
2 the network operations corresponding to a new routing policy.

1 70. The system of claim 69, wherein the computer further compares the new routing
2 policy to an existing routing policy, and implements the differences between the new and the
3 existing routing policies.

1 71. The system of claim 62, wherein the backbone is a Dense Wave Division
2 Multiplexing system.

1 72. The system of claim 62, wherein each point of presence automatically collects traffic
2 data and the network operations center automatically analyzes the traffic data.

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